

Technical Award (Redevelopment project of Tsuruta dam - Leading project of dam renewal -)

**Reason for award:**

Tsuruda Dam, a gravity concrete dam constructed in 1966, is located near the center of Sendai River in the northern part of Kagoshima prefecture. In July 2006, record heavy rainfall flooded the Sendai River basin. In April of the following year, the Tsuruda Dam Redevelopment Project was created to improve flood control.

This was the largest-ever dam redevelopment project. It was carried out under many constraints, such as the dam must continue to function during the project. Thanks to the development of analysis and verification technologies to guarantee the safety of the dam during the operation, as well as various devices and new technologies for the construction of the dam, the 50-year old dam was reinforced with new flood control systems within the tight work period of ten years that the contractor had promised the local government. During the course of the project, remarkable progress was made in dam regeneration techniques, including early consensus-building with the local residents through open three-party discussions, the excavation of the Japan's largest dam body, and submerged work at greater depths while maintaining the reservoir level. Moreover, to reduce emissions, concrete debris from the dam body excavation was used to construct the landslide deterrence facilities for the excavated slope surface on the right side of the energy dissipation facilities. Furthermore, infrastructure tours of the dam regeneration project site were held in cooperation with local parties, contributing to regional development.

“Dam regeneration” work allows existing dams to be passed down to future generations as valuable infrastructure resources. Similar projects will likely be implemented nationwide. This project was a significant dam regeneration project and is worthy of receiving the Innovative Technique Award (II Group).